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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,147	10/21/2005	Katsuyoshi Hoshino	052095	6223

38834 7590 07/12/2007  
WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP  
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WASHINGTON, DC 20036

EXAMINER

THOMAS, JAISON P

ART UNIT	PAPER NUMBER
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1751

MAIL DATE	DELIVERY MODE
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07/12/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/526,147	Applicant(s) HOSHINO ET AL.	
	Examiner Jaison P. Thomas	Art Unit 1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-9 is/are rejected.
- 7) ☐ Claim(s) 4 and 10-15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

### DETAILED ACTION

1. This action is responsive to amendments filed on 4/12/2007.
2. Claims 1-15 are pending. Claims 1,3 and 4 are amended. Claims 5-15 are new.
3. Claims 1-3 stand rejected under 35 USC 102(a) as being anticipated by Geer et al. (US Patent 6440332).
4. The rejection of Claim 4 under 35 USC 103 as being obvious over Muramatsu (US Patent 4477485) is withdrawn in view of applicant's arguments.

### *Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Geer et al. (US Patent 6440332) in view of Weir (US Patent 6613452).

Geer is relied upon as discussed in the previous Office Action. Geer teaches a group of anodic metals that can be used in the coating compositions including aluminum, cadmium, magnesium and zinc in which one of ordinary skill in the art could reasonably expect to create the oxides as required by instant Claims 5 and 6 in the presence of water and electroconductive polymer of the Geer coating composition.

Geer is relied upon as discussed above. However, Geer does not teach the use of indium containing metals or a polymer coating with a thickness of 1 micron or less.

Weir teaches various types of anodic metals which include aluminum, zinc, magnesium and indium (Col. 3, lines 59-61).

With respect to indium, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the aluminum of Geer with another anodic metal such as indium as substitution of art recognized equivalents is within the level of the ordinary skill in the art.

With respect to the thickness limitations, It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the thickness of the waterborne coatings of Geer through routine experimentation for best results. As to optimization results, a patent will not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the prima facie case of obviousness. See *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). See also *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

### ***Response to Arguments***

7. Applicant's arguments filed 4/12/2007 with respect to Claims 1-3 have been fully considered but they are not persuasive.

Applicant argues that a "large difference in work function between electroconductive polymer and metal" is required in order for the galvanic corrosion reaction to occur. Applicant also argues that the electroconductive polymer must be

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"oxidized" i.e. a cation radical and dication must be present. Applicant concludes that the claimed material is patenably distinct from the material disclosed in Geer et al. (US Patent 6440332).

The Examiner respectfully disagrees with the above arguments. Geer teaches an electroconductive polymer (Baytron P which is known in the art as a polythiophene doped and complexed with polystyrene sulfonic acid, see attached STN Registry database entry), water and aluminum powder in a waterborne coating composition. The Examiner contends that said electroconductive polymer/dopant complex would product cationic radicals as required by the instant claims since polystyrene sulfonic acid would generate free hydrogen ion in aqueous solution. Further the polymers and metals disclosed by Geer are identical in nature the polymers and metals disclosed in the Applicant's specification (see pg. 7, line 10 of the Specification for polythiophene derivatives and pg. 7, line 27 of the Specification for aluminum powder) and thus should possess the same work function differences as required by the instant claims for the galvanic reaction process to occur. With respect to method claim 3, the Examiner construes the method as only requiring a mixture of metal/metal oxide, conductive polymer and water to be in contact with each other and such a composition is expressly taught in Geer.

***Allowable Subject Matter***

8. Claims 3,4 and 10-15, directed to methods of producing the modified electroconductive polymer, would be allowable if Claim 3 is rewritten with the limitations

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of Claims 1 and 4 included therein. The prior art of record does not teach, suggest or motivate the production of an electroconductive polymer with metal oxide particles dispersed therein where a metal layer is formed on a electroconductive polymer substrate and the metal is subsequently oxidized and diffused throughout the polymer in the presence of water.

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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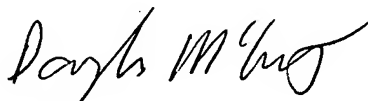
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jaison P. Thomas whose telephone number is (571) 272-8917. The examiner can normally be reached on Mon-Fri 8:30 am to 5:00 pm.

11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on (571) 272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jaison Thomas  
Examiner  
7/3/2007

JT

  
DOUGLAS MCGINTY  
SUPERVISORY PATENT EXAMINER

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